ABSTRACT OF THE DISCLOSURE

A signal processing apparatus processes an image signal outputted from an image sensing device which has a plurality of photoelectric conversion elements covered with a color filter and which can be driven in a first reading method of separately reading signals from the respective photoelectric conversion elements and a second 10 reading method of adding signals generated by the photoelectric conversion elements by at least two signals corresponding to the photoelectric conversion elements of a same color then outputting the added signals. The signal 15 processing apparatus comprises a switch that switches between the first reading method and the second reading method, and a correction unit that passes signals inputted from the image sensing device without correcting positions of barycenters of the inputted signals when the first reading method is set, and corrects positions of barycenters of the inputted signals when the second reading method is set.